

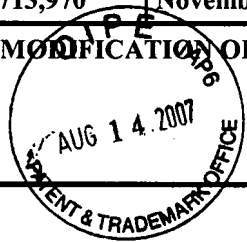
TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT
(Under 37 CFR 1.97(d))

Docket No. *17106*
17106

In Re Application Of: **Roland Contreras, et al.**

| Application No. | Filing Date | Examiner | Customer No. | Group Art Unit | Confirmation No. |
|-----------------|-------------------|------------------|--------------|----------------|------------------|
| 10/713,970 | November 14, 2003 | K. H. Gebreyesus | 23389 | 1656 | 5158 |

Title: **MODIFICATION OF PROTEIN GLYCOSYLATION IN METHYLOTROPHIC YEAST**



Address to:
Commissioner for Patents

The Information Disclosure Statement submitted herewith is being filed after the period specified in 37 CFR 1.97(c), and on or before payment of the issue fee, and is accompanied by the Statement as specified in 37 CFR 1.97(e) and the fee set forth in 37 CFR 1.17(p).

- ☐ A check in the amount of _____ is attached.
- ☒ The Director is hereby authorized to charge and credit Deposit Account No. 19-3886/RCT as described below.
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Xiaochun Zhu
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08/15/2007 WASFRW1 00000009 193886 10713970
01 FC:1806 180.00 DA

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THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Roland Contreras, et al.

Examiner: Kagnew H. Gebreyesus

Serial No.: 10/713,970

Art Unit: 1656

Filed: November 14, 2003

Docket: 17106

For: MODIFICATION OF PROTEIN
GLYCOSYLATION IN
METHYLOTROPHIC YEAST

Dated: August 10, 2007

Confirmation No.: 5158

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with 37 C.F.R. §§ 1.97 and 1.98, it is requested that the following references, which are also listed on the attached Form PTO-1449, be made of record in the above-identified case.

1. PCT International Publication No. WO 03/56914 A1, published July 17, 2003;

CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8(a)

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Dated: August 10, 2007


Xiaochun Zhu

08/15/2007 WASFAW1 00000009 10713970
01 FC:1806 180.00 DA

2. Routier F. H. et al., "The glycosylation pattern of a humanized IgG1 antibody (D1.3) expressed in CHO cells", *Glycoconjugate Journal* 14: 201-207 (1997);
3. Kornfeld R. et al., "Assembly Of Asparagine-Linked Oligosaccharides", *Ann. Rev. Biochem.* 54: 631-664 (1985);
4. Malissard M. et al., "Expression of Functional Soluble Forms of Human β -1,4-Galactosyltransferase 1, α -2,6-Sialyltransferase, and α -1,3-Fucosyltransferase VI in the Methylotrophic Yeast *Pichia pastoris*", *Biochemical and Biophysical Research Communications* 267: 169-173 (2000);
5. Bencurova M. et al., "Expression of eukaryotic glycosyltransferases in the yeast *Pichia pastoris*", *Biochimie* 85: 413-422 (2003);
6. Schwientek T. et al., "Golgi Localization and in Vivo Activity of a Mammalian Glycosyltransferase (Human β 1, 4-Galactosyltransferase) in Yeast", *The Journal of Biological Chemistry* 271(7): 3398-3405 (1996);
7. Vervecken W. et al., "In Vivo Synthesis of Mammalian-Like, Hybrid-Type N-Glycans in *Pichia pastoris*", *Applied and Environmental Microbiology* 70(5): 2639-2646 (2004);
8. Bobrowicz P. et al., "Engineering of an artificial glycosylation pathway blocked in core oligosaccharide assembly in the yeast *Pichia pastoris*: production of complex humanized glycoproteins with terminal galactose", *Glycobiology* 14(9): 757-766 (2004);
9. Czlapinski J. L. et al., "Synthetic glycobiology: exploits in the Golgi compartment", *Current Opinion in Chemical Biology* 10: 645-651 (2006);
10. PCT International Publication No. WO 04/074499 A2, published September 2, 2004; and
11. PCT International Publication No. WO 05/100584 A2, published October 27, 2005.

Reference numbers 1-11 were cited in a Supplementary European Search Report dated May 10, 2007 received from the European Patent Office. Applicants are submitting copies of the above-cited references, together with a copy of the Supplementary European Search Report. The relevance of Reference numbers 1-11 has been described in the Supplementary European Search Report.

Applicants submit that the other references cited in the Supplementary European Search Report, namely Maras et al., "In vitro conversion of the carbohydrate moiety of fungal glycoproteins to mammalian-type oligosaccharides", *Eur. J. Biochem.* 249: 701-707 (1997); WO 02/00879 A2, published January 3, 2002; Hamilton et al., "Production of Complex Human Glycoproteins in Yeast", *Science* 301: 1244-1246 (2003); Choi et al., "Use of combinatorial genetic libraries to humanize N-linked glycosylation in the yeast *Pichia pastoris*", *PNAS* 100(9): 5022-5027 (2003); WO 02/00856 A2, published January 3, 2002; and Chiba et al., "Production of Human Compatible High Mannose-type (Man₅GlcNAc₂) Sugar Chains in *Saccharomyces cerevisiae*", *The Journal of Biological Chemistry* 273(41): 26298-26304 (1998), were previously submitted with Applicants' Information Disclosure Statement dated April 6, 2004.

The undersigned hereby states that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.

Inasmuch as this Information Disclosure Statement is being submitted in accordance with the schedule set out in 37 C.F.R. §§ 1.97(d) and (e), the Commission is hereby authorized to charge the fee in the amount of \$180.00 to Deposit Account No. 19-3886/RCT.

Respectfully submitted,

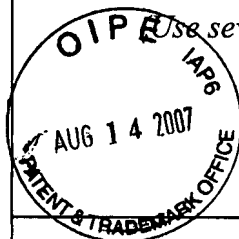


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PATENT AND TRADEMARK OFFICE**LIST OF PRIOR ART
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Atty. Docket No. (Optional)

17106

Application Number

10/713,970

Applicant(s)

Roland Contreras, et al.

Filing Date

November 14, 2003

Group Art Unit

1656

FOREIGN PATENT DOCUMENTS

| | REF | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION | |
|--|-----|-----------------|------------|---------|-------|----------|-------------|----|
| | | | | | | | YES | NO |
| | 1. | WO 03/56914 A1 | 7/17/2003 | | | | | |
| | 10. | WO 04/074499 A2 | 9/2/2004 | | | | | |
| | 11. | WO 05/100584 A2 | 10/27/2005 | | | | | |

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

| | | |
|--|----|--|
| | 2. | Routier F. H. et al., "The glycosylation pattern of a humanized IgG1 antibody (D1.3) expressed in CHO cells", <i>Glycoconjugate Journal</i> 14: 201-207 (1997) |
| | 3. | Kornfeld R. et al., "Assembly Of Asparagine-Linked Oligosaccharides", <i>Ann. Rev. Biochem.</i> 54: 631-664 (1985) |
| | 4. | Malissard M. et al., "Expression of Functional Soluble Forms of Human β -1,4-Galactosyltransferase 1, α -2,6-Sialyltransferase, and α -1,3-Fucosyltransferase VI in the Methylophilic Yeast <i>Pichia pastoris</i> ", <i>Biochemical and Biophysical Research Communications</i> 267: 169-173 (2000) |
| | 5. | Bencurova M. et al., "Expression of eukaryotic glycosyltransferases in the yeast <i>Pichia pastoris</i> ", <i>Biochimie</i> 85: 413-422 (2003) |
| | 6. | Schwientek T. et al., "Golgi Localization and in Vivo Activity of a Mammalian Glycosyltransferase (Human β 1, 4-Galactosyltransferase) in Yeast", <i>The Journal of Biological Chemistry</i> 271(7): 3398-3405 (1996) |
| | 7. | Vervecken W. et al., "In Vivo Synthesis of Mammalian-Like, Hybrid-Type N-Glycans in <i>Pichia pastoris</i> ", <i>Applied and Environmental Microbiology</i> 70(5): 2639-2646 (2004) |
| | 8. | Bobrowicz P. et al., "Engineering of an artificial glycosylation pathway blocked in core oligosaccharide assembly in the yeast <i>Pichia pastoris</i> : production of complex humanized glycoproteins with terminal galactose", <i>Glycobiology</i> 14(9): 757-766 (2004) |
| | 9. | Czlapinski J. L. et al., "Synthetic glycobiology: exploits in the Golgi compartment", <i>Current Opinion in Chemical Biology</i> 10: 645-651 (2006) |

EXAMINER

DATE CONSIDERED

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.